FIG. 1

RADIUS
(REMOTE AUTHENTICATION
DIAL IN USER SERVICE
SERVER
RA1
SERVER
71
60
THE
INTERNET
SERVER
72
RA2
RADIUS
(REMOTE AUTHENTICATION
DIAL IN USER SERVICE
SERVER
61
ISP1
62
ISP2
AG11
AM11
BM11
AG21
BM21
BM31
AG41
BM41
SW11
SW12
OLT21
AM21
AG31
AM31
MODEM11
51
52
53
54
55
56
PPP12
PPP12
ANALOG
CIRCUIT
ISDN
CIRCUIT
OPTICAL
ACCESS
ADSL
CATV
ISDN
CIRCUIT
IP11
IP12
IP13
IP14
IP15
IP16

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FIG. 2

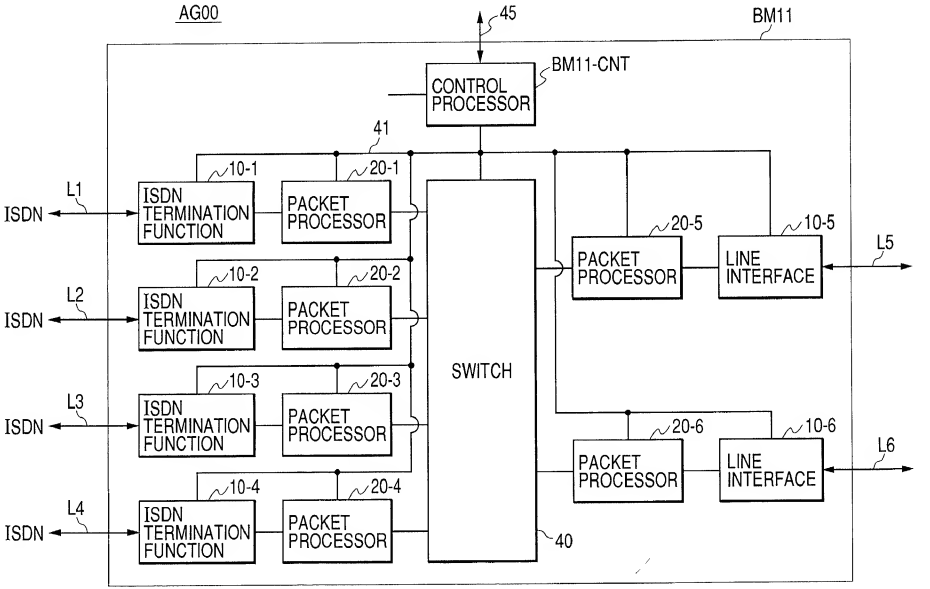

FIG. 3

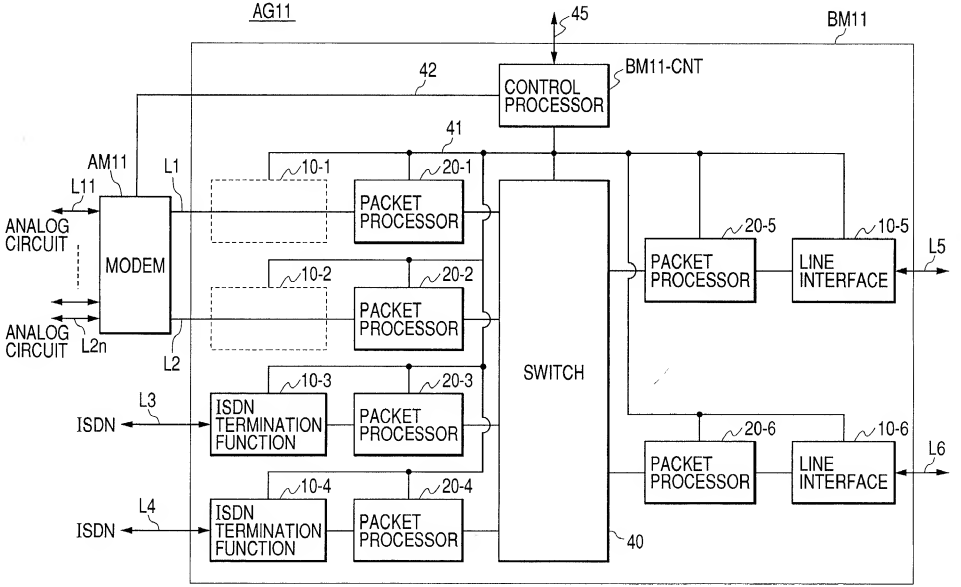
AG11
45
BM11
42
CONTROL PROCESSOR
BM11-CNT
41
AM11
L1
L11
10-1
20-1
PACKET PROCESSOR
ANALOG CIRCUIT
MODEM
10-2
20-2
PACKET PROCESSOR
ANALOG CIRCUIT
L2n
L2
10-3
20-3
ISDN
L3
ISDN TERMINATION FUNCTION
PACKET PROCESSOR
SWITCH
10-4
20-4
ISDN
L4
ISDN TERMINATION FUNCTION
PACKET PROCESSOR
40
20-5
10-5
PACKET PROCESSOR
LINE INTERFACE
L5
20-6
10-6
PACKET PROCESSOR
LINE INTERFACE
L6

FIG. 4

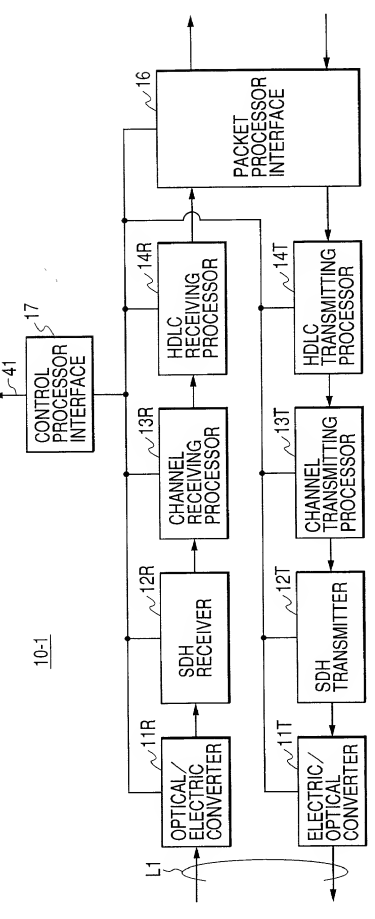
10-1
BM11-CNT
41
CONTROL PROCESSOR INTERFACE
17
16
PACKET PROCESSOR INTERFACE
L1
OPTICAL/ ELECTRIC CONVERTER
11R
SDH RECEIVER
12R
CHANNEL RECEIVING PROCESSOR
13R
HDLC RECEIVING PROCESSOR
14R
ELECTRIC/ OPTICAL CONVERTER
11T
SDH TRANSMITTER
12T
CHANNEL TRANSMITTING PROCESSOR
13T
HDLC TRANSMITTING PROCESSOR
14T

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FIG. 5

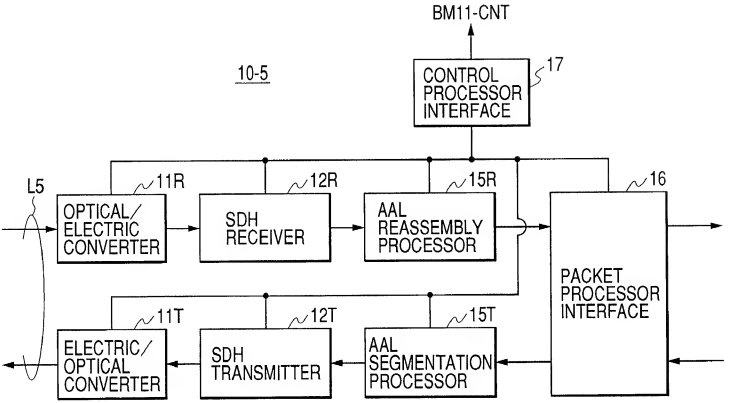

FIG. 6

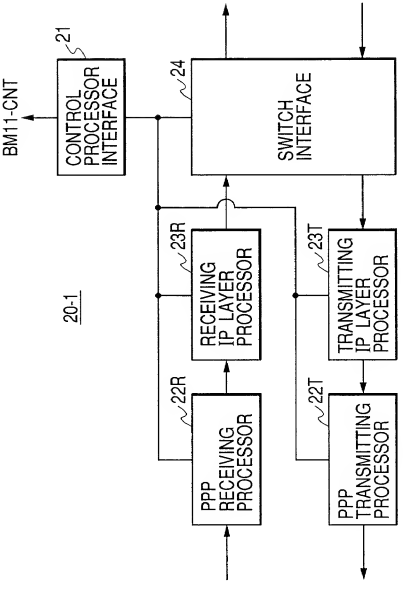
20-1
BM11-CNT
21
CONTROL PROCESSOR INTERFACE
24
SWITCH INTERFACE
22R
PPP RECEIVING PROCESSOR
23R
RECEIVING IP LAYER PROCESSOR
22T
PPP TRANSMITTING PROCESSOR
23T
TRANSMITTING IP LAYER PROCESSOR

FIG. 7

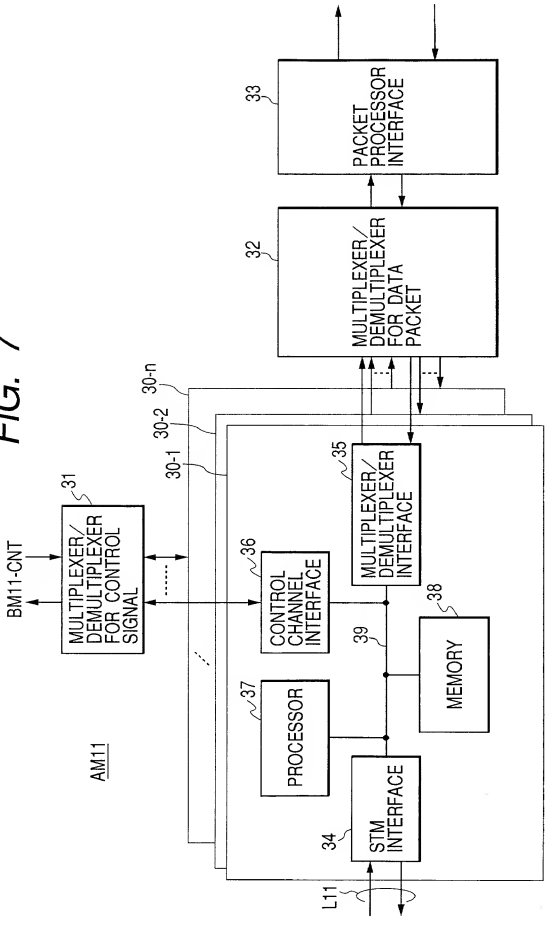
AM11
BM11-CNT
MULTIPLEXER/ DEMULTIPLEXER FOR CONTROL SIGNAL
31
30-1
30-2
30-n
CONTROL CHANNEL INTERFACE
36
MULTIPLEXER/ DEMULTIPLEXER INTERFACE
35
MULTIPLEXER/ DEMULTIPLEXER FOR DATA PACKET
32
PACKET PROCESSOR INTERFACE
33
PROCESSOR
37
MEMORY
38
39
STM INTERFACE
34
L11

FIG. 8

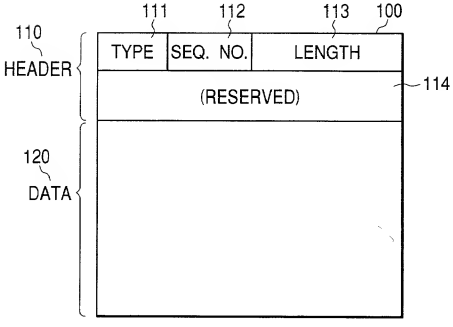
111
112
113
100
110
HEADER
TYPE
SEQ. NO.
LENGTH
114
(RESERVED)
120
DATA

FIG. 9

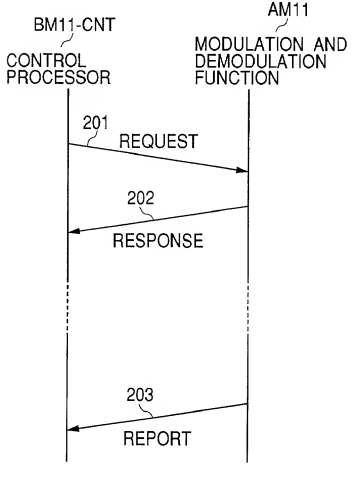
BM11-CNT
CONTROL PROCESSOR
AM11
MODULATION AND DEMODULATION FUNCTION
201
REQUEST
202
RESPONSE
203
REPORT

FIG. 10

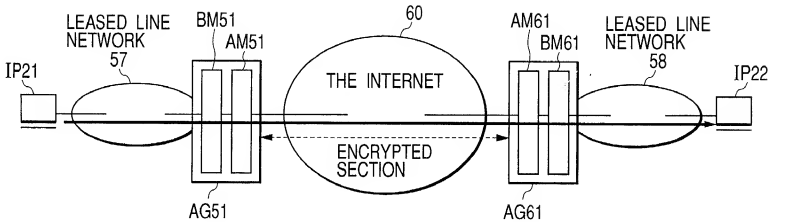
LEASED LINE NETWORK
57
BM51
AM51
IP21
60
THE INTERNET
ENCRYPTED SECTION
AM61
BM61
LEASED LINE NETWORK
58
IP22
AG51
AG61

FIG. 11

301 ACCESS METHOD	302 FUNCTION ON ADDITIONAL MODULE	303 FUNCTION SPECIFIC TO SERVICE ON BASIC MODULE	304 COMMON FUNCTION ON BASIC MODULE
ANALOG CIRCUIT	MODEM	(NOT APPLICABLE)	· PPP PROCESSOR · IP LAYER PROCESSOR · PACKET SWITCHING · SYSTEM CONTROL FUNCTION
ISDN	(NOT APPLICABLE)	ISDN TERMINATION	
ADSL	DSLAM	(NOT APPLICABLE)	
CATV	CMTS	(NOT APPLICABLE)	
LEASED LINE	ENCRYPTION	(NOT APPLICABLE)	
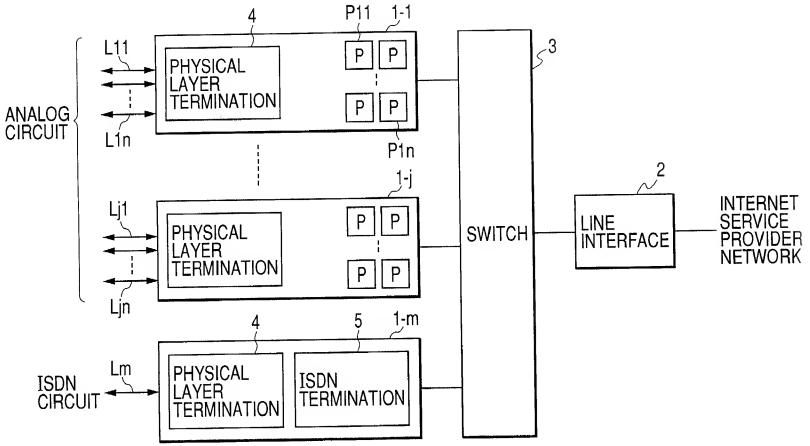
FIG. 12
PRIOR ART